

# KODACHROME 25 Movie Film (Daylight) 8 mm and 16 mm

Use this film in daylight to make color movies for projection. It has moderate speed, extremely fine grain, and extremely high sharpness. Use KODACHROME 40 Movie Film (Type A) for making indoor movies with movie lights.

## HANDLING

Load and unload your camera in subdued light. Have your film processed promptly after exposure. Don't keep your movie camera and film in a hot place, such as the glove compartment or rear-window shelf of a car.

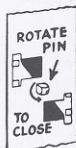
If your camera uses batteries, clean the battery and camera contacts occasionally with a rough cloth. Use fresh batteries, and make sure they are properly installed.

**ROLL:** Remove and save the paper band to put around the exposed film. Thread the film in the camera with the light-colored side toward the lens. To expose double 8 mm and double super 8 film completely, run it through your camera twice. When the film has been through your camera once, you'll see "KM HALF EXP" punched in the end of the 8 mm film.

**MAGAZINES:** Handle the magazine with care. Do not force it into the camera. If bent, it will not operate properly. Keep the magazine in its shipping carton when it is not in the camera. *Never remove the tape from the magazine.*

**16 mm Magazine:** Be sure the pin on the top of the magazine is at the forward end of the slot and that it fits into the notch in the camera.

**8 mm Magazine:** Make sure the shutter on the front is completely closed. If it is even partially open (see sketch), rotate the pin counterclockwise with your fingers. Otherwise, the pin can be sheared in your camera.



Insert the magazine in your camera 1ST SIDE up. Set the camera footage indicator. After exposing the entire 25 feet of film on this side, turn the magazine 2ND SIDE up and reset the footage indicator. Then expose the other side of the 25-foot film. Mark the exposed footage on the decal when removing the magazine from your camera.

When your camera is loaded, the film is released and may cause a whirring sound. This is normal.

## FILM SPEED

Type of Light

**DAYLIGHT**

Meter Setting

**ASA 25**

Use this meter setting with your automatic camera or exposure meter. For setting a manually adjustable camera without an exposure meter, use the exposure table below.

### DAYLIGHT EXPOSURE TABLE

For average subjects. Based on using a camera speed of 16 to 18 frames per second.

| Bright or Hazy Sun on Light Sand or Snow | Bright or Hazy Sun (Distinct Shadows) | Cloudy Bright (No Shadows) | Heavy Overcast | Open Shade† |
|------------------------------------------|---------------------------------------|----------------------------|----------------|-------------|
|                                          |                                       |                            |                |             |
| f/16                                     | f/11 ↓ 16*                            | f/8                        | f/5.6          | f/5.6       |

\*For frontlighted subjects. For backlighted close-up subjects, use halfway between f/5.6 and f/8.

†Subject shaded from the sun but lighted by a large area of sky.



## PROCESSING

You can return the exposed film to your photo dealer for processing by Kodak or another laboratory, or you can mail it directly with the appropriate processing mailer. **Film price does not include processing by Kodak.**

**MAGAZINES:** Place the exposed film magazine in the yellow carton. The magazine is the property of Kodak and the film price includes a deposit on the magazine, which is deducted from the processing charge if the film is processed by Kodak. If the film is processed by another laboratory, consult them about a magazine allowance.

We will make a refund for a quantity return of Kodak magazines when an established procedure is followed.

**ROLLS:** Secure the exposed film tightly with the paper band or a rubber band; then place it in the can.

**DUPLICATES:** Your photo dealer can arrange to have KODAK Color Movie Duplicates made from originals of good quality. Although the duplicates may differ slightly from the original, they are satisfactory for most purposes.

## READ THIS NOTICE

The return of any film or print to us for processing or any other purpose will constitute an agreement by you that if any such film or print is damaged or lost by us or any subsidiary company it will be replaced with an equivalent amount of unexposed Kodak film and processing. Except for such replacement, the handling of such film or prints by us is without warranty or liability even though damage or loss is caused by negligence or other fault.

## STORING KODACHROME FILM

Have the film processed promptly after exposure to avoid changes in the undeveloped image. Don't leave a partially exposed roll of film in the camera for an extended period of time. Store your films in a cool, dry place. Don't keep your camera and film in a hot place, such as the glove compartment or rear-window shelf of a car.

## CLEANING AND LUBRICATING MOVIE FILM

If your movies need cleaning or are unsteady

when you project them, clean and lubricate the film. Lubricating your film helps it pass smoothly through your projector. You can do this in one easy operation by using KODAK Movie Film Cleaner (with Lubricant), or equivalent, available from photo dealers. Use only enough cleaner to moisten a cloth pad; too much may produce streaks on the film. Other cleaners containing alcohol may remove some of the color.

## MORE INFORMATION

If you have questions about this film, write to Eastman Kodak Company, Photo Information, Dept. 841M, Rochester, N.Y. 14650. For more information, ask your photo dealer for a copy of *Storage and Care of KODAK Color Films* (E-30) or *Lubricating Your Processed Movies* (AD-7); or obtain a copy by writing to Kodak at the address given above. For tips on making better movies, read *Better Movies in Minutes* (AD-4) and *Home Movies Made Easy* (AD-5), for sale by your photo dealer.

## READ THIS NOTICE

This film will be replaced if defective in manufacture, labeling, or packaging, or if damaged or lost by us or any subsidiary company. Except for such replacement, the sale, processing, or other handling of this film is without warranty or liability even though defect, damage, or loss is caused by negligence or other fault. Film should not be removed from magazine before processing. The magazine is the property of Eastman Kodak Company and film price includes a deposit on the magazine. Since color dyes may in time change, this film will not be replaced for, or otherwise warranted against, any change in color.



Consumer Markets Division

KP# 66434d 8-77

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Rochester, New York 14650

Printed in U.S.A.



INSTRUCTIONS FOR USING

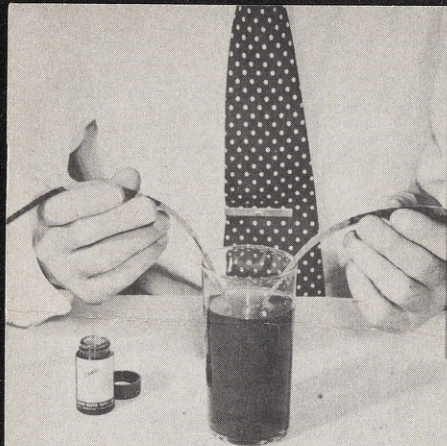


# FOTOFADE

REQUIRES NO SPECIAL EQUIPMENT OR  
EXPERIENCE • EQUALLY EFFECTIVE  
ON NEW OR OLD FILM

**CRAIG, INCORPORATED**  
a division of  
**THE KALART COMPANY, INC.**  
Plainville, Connecticut





It's Ea



Craig Fotofade makes it easy and economical to give your home movies smooth-changing scenes at a cost of just a few cents! No expensive camera attachments are required . . . no special experience is necessary. Through a simple dipping process this special dye chemical makes safe, permanent fades and wipes on all black and white or color film. With it, you can add professional-appearing dissolves to your finished film—allowing a selectivity not possible with camera attachments.

### **TO MAKE FOTOFAD SOLUTION**

Dissolve contents of Fotofade bottle in 8 ounces of water (distilled water preferred) using a graduate or other container deep enough to allow dipping.

### **HERE'S HOW TO MAKE FADES**

First moisten film to be treated in clear water for 30 seconds. Then slowly dip a loop of film into the solution, frame by frame, until the desired length of fade is achieved. As soon as the full dip has been completed, withdraw film at once, thus securing a gradual fade with maximum den-

# Easy to Give Home Movies a "Studio" Finish with

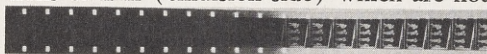


# FOTOFADE

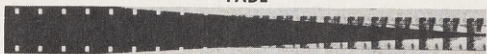
sity in the center. After removing film from solution, rinse in clear water, sponge and dry.

## HERE'S HOW TO MAKE WIPES

You can make center, side, or cross wipes as shown in the illustration. Use Waterproof Tape, placing it diagonally over portions of film (emulsion side) which are not



FADE



CENTER WIPE



SIDE WIPE



CROSS WIPE

to be blackened. Be sure to press the tape down firmly so that dye can not penetrate beneath the tape. After moistening film in clear water for 30 seconds, dip into Fotofade solution for 2 minutes. Rinse well in clear water, sponge, dry and remove tape. **IMPORTANT:** When making fades or wipes on sound films always protect the sound tract by covering it with tape.



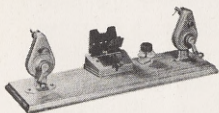


## **"Your Table-Top is Your Home Movie Theatre" with a CRAIG PROJECTO - EDITOR**

Imagine the fun—and the convenience—of being able to set-up a complete movie theatre on a table-top! And in only 60 seconds. Pictures show brilliantly on large  $3\frac{1}{4}$ " x  $4\frac{1}{4}$ " screen. You can show movies in fast, normal or slow motion—run scenes in reverse—stop film at any point to examine single frames with complete safety to film. And, for editing, everything is handy. Includes Craig Viewer, Craig Master Splicer, Take-up and Rewind Reel Spindles, film cement and trim Carrying Case. Either model, KE-8 for 8mm film, or KE-16 for 16mm film, price complete, \$79.50.

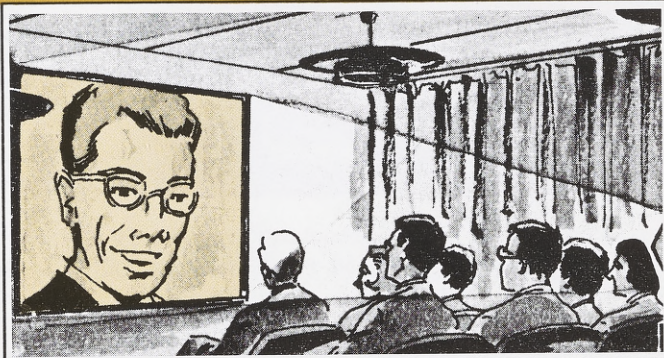
### **CRAIG EDITING COMBINATIONS**

A low cost Craig Splicer-Rewind Editing Combination is an excellent unit for all film rewinding and repairing requirements. The Craig Master Splicer makes accurate splices that run smoothly through projector. You have a choice of Craig Junior Rewinds (8mm reels to 400 feet capacity), Craig Senior Rewinds (8mm or 16mm reels to 400 feet capacity—tension brake and lock) or Craig Master Rewinds (2000 feet capacity—tension brake and lock—large wooden handles). Mounted on Polished Hardwood Base. Ask your photo dealer to show you a Craig Editing Combination.





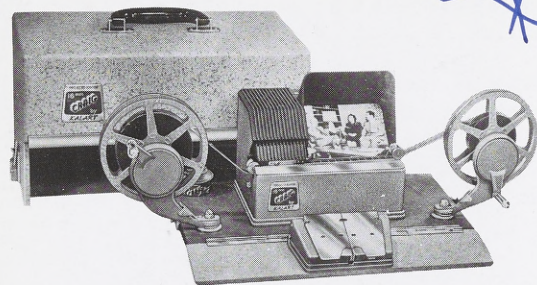
**AUDIO-VISUAL  
EDUCATIONAL TELEVISION  
PRODUCTS  
MOVIE EDITING EQUIPMENT**







MOVIE EDITING EQUIPMENT



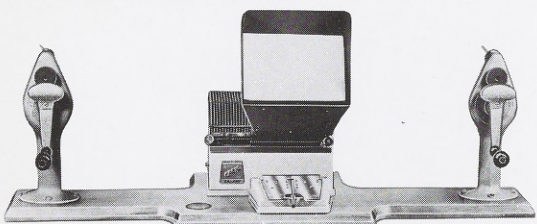
CRAIG PROJECTO-EDITOR®

Model KE-S8 for Super 8mm film

Screen Size 3¼" x 4¼"

Model KE-16 for 16mm film

Screen Size 3¼" x 4¼"



"PRO" Model V4643 with 4" x 6" viewing screen and Master Rewinds for up to 2000' reels. Also available are Viewers only, Rewinds, and Splicers.

- V-1643 Craig Senior Editor/Viewer Combination
- V-46 Craig "Pro" Viewer 16mm (4" x 6" screen)
- V-16 Craig Senior Viewer only — 16mm (3¼" x 4¼" screen)
- V-S8 Craig Senior Super Viewer only — Super 8mm (3¼" x 4¼" screen)
- R-4 Craig Pro Rewinds 16mm (2000 ft. capacity)
- R-4S Craig Master Rewinds for Super 8 (2000 ft. capacity)
- S-6 Craig Master Splicer (8mm, Super 8mm, 16mm)
- C-4 Craig Formula #7 Film Cement (.16 oz.)
- C-1 Craig Formula #7 Film Cement (1 oz. bottle)

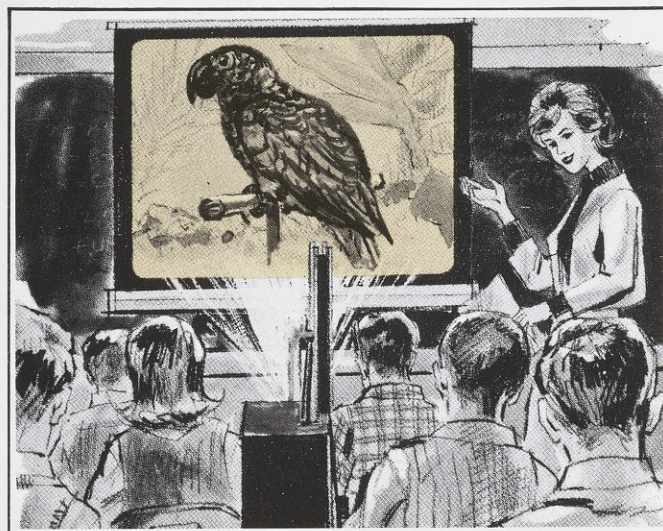


Film Cement  
Code C-1



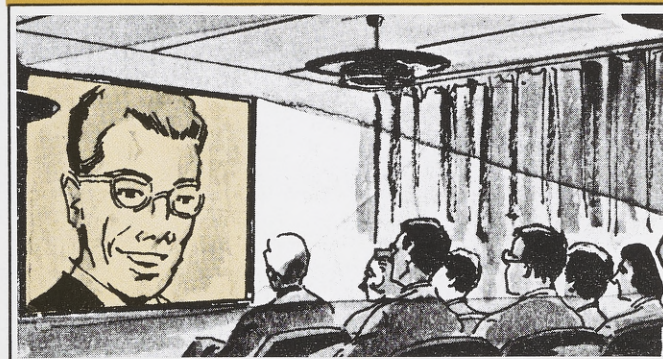
KALART VICTOR CORPORATION

Audio Visual and Educational Television Products  
Plainville, Connecticut 06062, U.S.A.  
Telephone: 203 — 747-1663



## AUDIO-VISUAL EDUCATIONAL TELEVISION PRODUCTS

## MOVIE EDITING EQUIPMENT

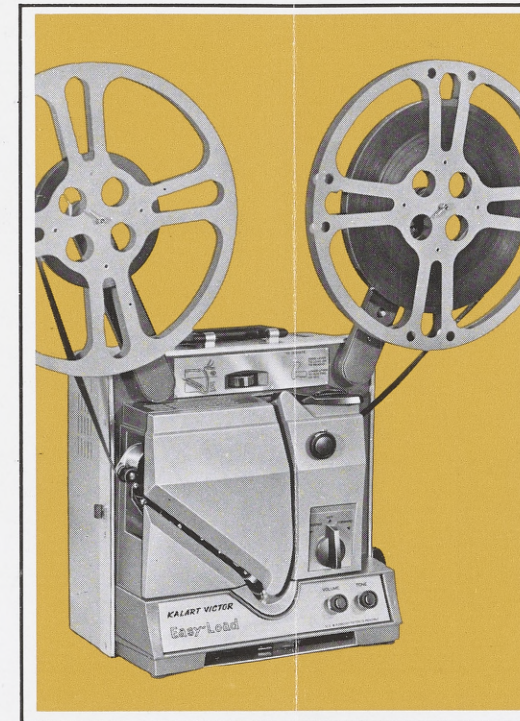


16mm SOUND MOTION PICTURE PROJECTORS

# Easy-Load Projector Model 90-25

A one-lever, easy-load automatic sound projector with a built-in 4" x 8" speaker, the 90-25 Easy-Load projector accomplishes with a single motion all the time-consuming and often frustrating operations inherent in less sophisticated equipment. Automatically, with the depression of a single uncomplicated lever, sprockets are engaged, the film gate is closed and top and bottom loops are sequentially adjusted. The 90-25 is further enhanced by:

- A rewind system designed to function *through the gate* as well as from reel to reel. Film can be removed or rewound at any time without having to project the entire reel.
- Film Safety Switch — loss of top loop automatically turns off projector.



- Loop Restorer — reforms lower loop automatically.
- Lamp House Door Interlock — automatically turns off both lamp and motor when door is opened.
- A low-voltage ETL Halogen lamp with built-in lamp ejector.
- 2" f:1.2 large-barrel lens w/rack & pinion focusing.
- Solid state amplifier, 25 watts RMS, modular construction, frequency responses flat from 100 to 18,000 cycles, volume control, tone control.
- Sound speed — Forward — Reverse.
- Folding, top mounted reel arms. No reel overhang.
- Listed as approved by Underwriters Laboratories and CSA Testing Lab.

**NEW**  
Model 90-25MP Magnetic Playback  
Model 90-25MPR Mag. Rec. & Playback  
Model 90-25MC3 w/Marc 300 Light Source  
Model 90-25PA for Pub. Add. System

### ACCESSORIES

#### Lenses

Coated projection lenses designed to produce maximum sharpness of focus and exceptional illumination:

|            |               |
|------------|---------------|
| 1", f:1.5  | 3", f:2       |
| 1½", f:1.5 | 3½", f:2      |
| 2", f:1.2  | 4", f:1.6     |
| 2½", f:1.6 | ZOOM 35-65 MM |

#### Matching Speakers

12" separately cased with 75 ft. speaker cord.  
Two 4" x 8" speakers mounted in case cover with 35 ft. cord.

#### Victorscope Anamorphic Lens

Permits showing wide-screen programs with the Kalart Victor Easy-Load projector



#### Zoom Converter

Full screen coverage from any projection distance with standard lens. Excellent where projection distances and screen sizes vary.

#### Slip Cover

Protect projector from dust, weather and scuffing, equipped with pockets for reel storage.

#### Reels — Cans

Sturdily constructed of heavy gauge metal.

#### Project-o-stand

All aluminum portable stand for projector. Legs can be removed and strapped to top when not in use. Carrying handle and straps permanently attached. Legs are adjustable.





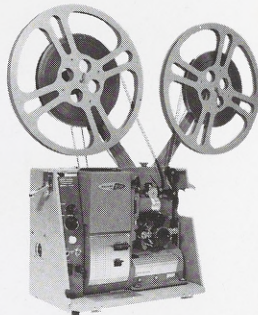
## 16mm SOUND MOTION PICTURE PROJECTORS

### 70 SERIES

The Economically Priced – Time Proven Projectors

#### MODELS 70-15 AND 70-25

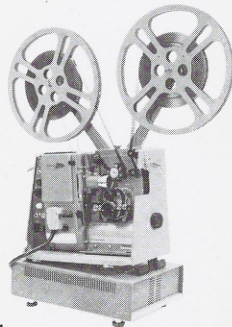
- Whisper Quiet operation
- Excellent optical sound quality
- Color-coded film path
- Safety film trips
- Versatile speaker arrangement
- 15 or 25 Watt RMS amplifier
- Once a year lubrication
- 2000' reel capacity
- Rapid Power rewind



#### 70 – MC3

With GE MARC 300  
High Intensity Light Source

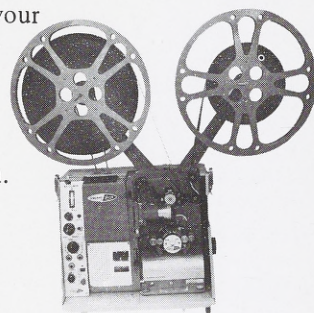
Incorporates most features of 70 Series but provides up to four times greater screen brightness. Excellent for auditoriums or high ambient light viewing rooms.



#### MODEL 82-25 MPR

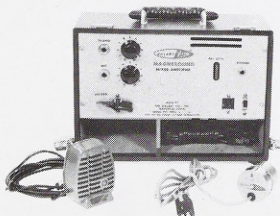
Record Your Own Soundtrack

Now you can RECORD your own soundtrack on magnetically striped 16mm film. Mix music or sound effects along with your narration. A VU meter, monitoring earphone jack and a separate input volume control is included.



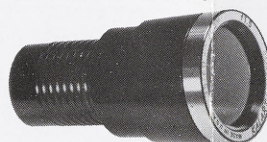
#### ACCESSORIES

##### KALART VICTOR MIXER MAGNESOUND MODEL MAG 3



This accessory enables the user to record and playback magnetically striped 16mm film. Simple controls and separate inputs permit mixing voice and music or sound effects.

##### ZOOM LENS



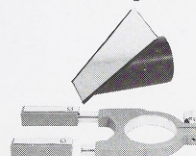
Full screen coverage from any projection distance within range of 35mm (1.38") to 60mm (2.36"). Fits Kalart Victor Series 65, 70, 75 and 82-25 projectors. Excellent where projection distances and screen sizes vary.

##### VICTORSCOPE ANAMORPHIC LENS

Permits showing wide-screen programs with the Kalart Victor projector. Specially designed bracket fits Kalart Victor projectors which incorporate necessary mounting holes. Lens can be plugged in and removed instantly. Lens may also be used as a "taking" lens with most 16mm cameras with an adapter.



##### Rear Projection Adapter Kit



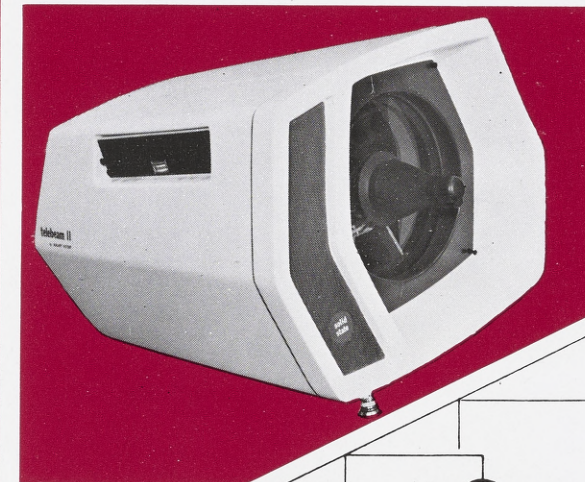
Right angle mirror attachment which permits use of 1/2 inch lens for rear screen projection. For Kalart Victor Series 70, 75, 70 MC3 and 82-25 MPR projectors.



## EDUCATIONAL TELEVISION PRODUCTS

### telebeam® II Large Screen TV "Picture Power"

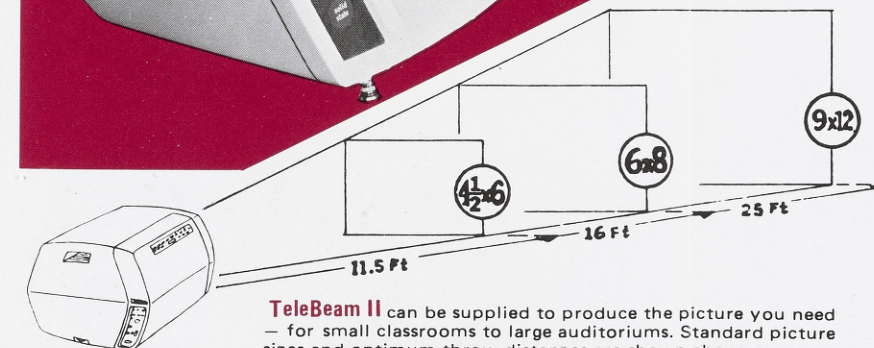
Model TB-II less tuner  
Model TB-II-T with tuner



TeleBeam II provides bright, crisp, monochrome displays from any composite video source, up to 15' x 20'. Big picture impact for better understanding, motivation, and retention.

As bright as 16mm film projection. No need to darken room. TeleBeam II is skillfully designed and engineered to provide unmatched reliability and trouble-free service. Air-cooled to prolong component life. Elevator tilt mechanism, and mechanical focus control.

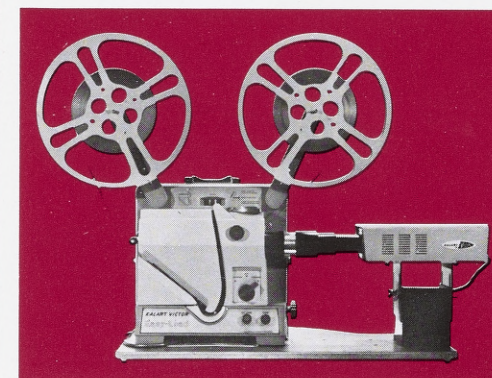
TeleBeam II is a precision Schmidt Optical System, which consists of a spherically concave first surface aluminized mirror, and a corrector plate, a high brightness picture tube, and solid state electronics.



#### FEATURES

- Single Case Unit
- Front & Rear Projection
- Dual Video Input
- Compact, Lightweight
- Audio Amplifier — Built-in Speaker
- Keystone Correction
- Built-in CRIS-PIC Image Impresser for a sharper crisper TV picture
- 550 Line Horizontal Resolution
- CCIR UNITS

#### 16MM TV PROJECTOR MODEL 90-TV WITH 4" LENS



#### Features

Same as shown for Model 90-25.

Shutter: Special, 5 bladed, for 120 light applications per second.

Synchronous motor.

Camera light shield for 1" vidicon 'C' mount. (Optional)

For previewing and multiplexer use, 2" lens required.

#### Uniplexer Model 90-TV-CT

Consisting of Easy-Load Projector Model 90-TV — Board — Camera Mount and TV Camera.



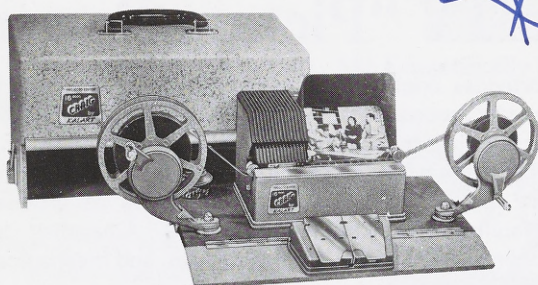
MODEL  
CP-1

The CRIS-PIC TV Image Impresser sharpens and crispens any TV signal to provide more contrast and picture detail.

CRIS-PIC is particularly effective with low bandpass TV outputs such as off-the-air broadcasts, videotape recorders and many TV cameras.

PAST Tele-Beam customers can also benefit by obtaining Model CP-1 CRIS-PIC.

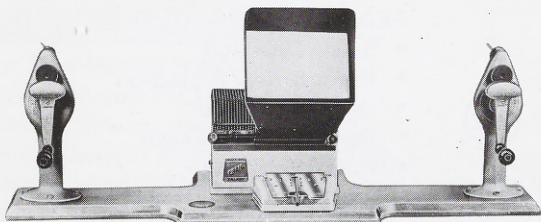


**CRAIG****MOVIE EDITING EQUIPMENT****CRAIG PROJECTO-EDITOR®****Model KE-S8 for Super 8mm film**

Screen Size 3¼" x 4¼"

**Model KE-16 for 16mm film**

Screen Size 3¼" x 4¼"



"PRO" Model V4643 with 4" x 6" viewing screen and Master Rewinds for up to 2000' reels. Also available are Viewers only, Rewinds, and Splicers.

**V-1643 Craig Senior Editor/Viewer Combination****V-46 Craig "Pro" Viewer 16mm (4" x 6" screen)****V-16 Craig Senior Viewer only — 16mm (3¼" x 4¼" screen)****V-S8 Craig Senior Super Viewer only — Super 8mm (3¼" x 4¼" screen)****R-4 Craig Pro Rewinds 16mm (2000 ft. capacity)****R-4S Craig Master Rewinds for Super 8 (2000 ft. capacity)****S-6 Craig Master Splicer (8mm, Super 8mm, 16mm)****C-4 Craig Formula #7 Film Cement (.16 oz.)****C-1 Craig Formula #7 Film Cement (1 oz. bottle)**

Film Cement  
Code C-1

**KALART VICTOR CORPORATION**

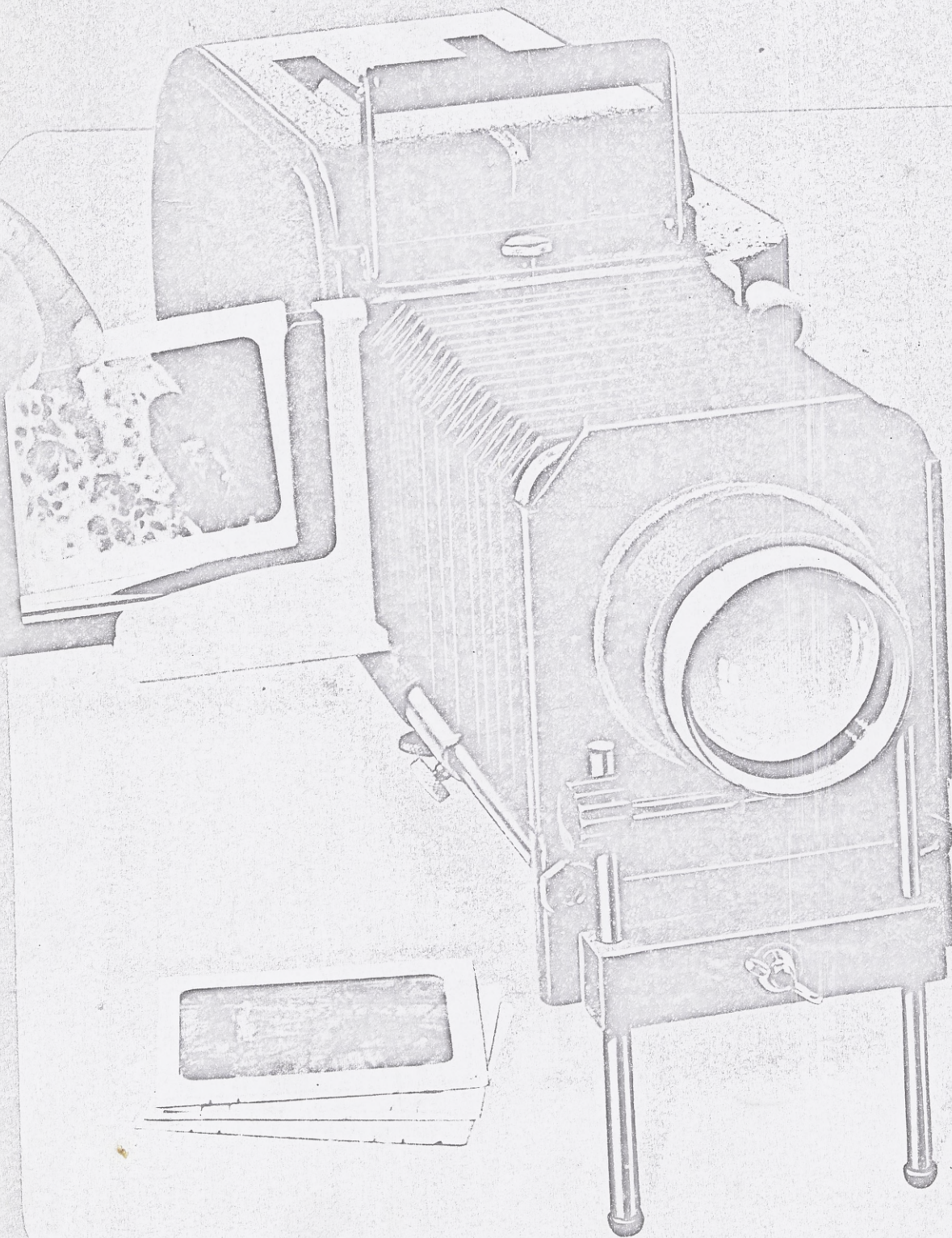
Audio Visual and Educational Television Products  
Plainville, Connecticut 06062, U.S.A.  
Telephone: 203 — 747-1663



THE INCOMPARABLE

# GK SERIES SLIDE PROJECTOR

for 3-1/4" x 4", 2-3/4" x 2-3/4", 2" x 2" . . . and Polarized Slides



KALART VICTOR Corporation  
Plainville, CT 06062  
Telephone: (203) 747-1663

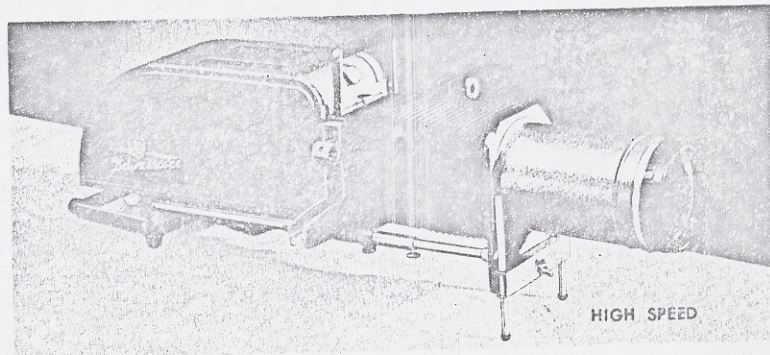
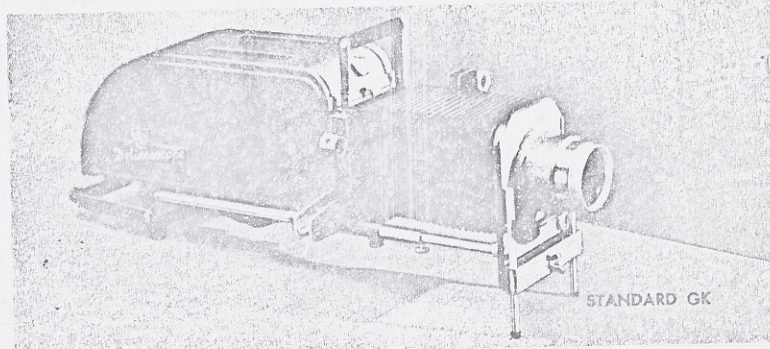


# Your Choice of Standard or High Speed Models

✓ Standard AO® GK Slide Projector  
... the ideal projector for normal  
classroom use.

✗ High Speed AO GK Slide Projector  
... recommended for exceptionally  
long projection distances, even under  
difficult projection conditions.

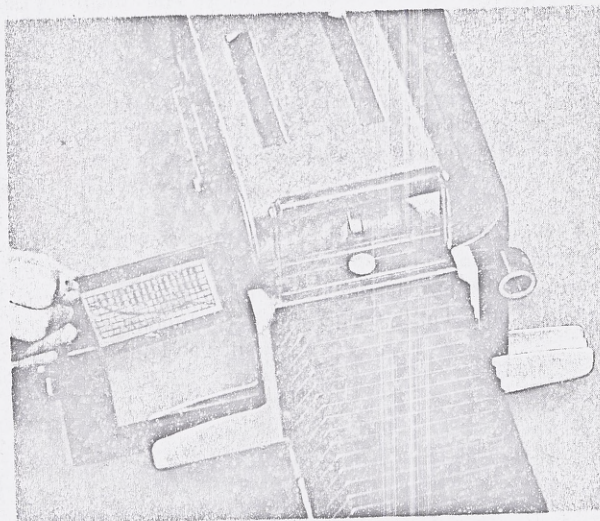
*\* i have*



**OUTSTANDING SCREEN PERFORMANCE:** Whatever your choice, you are assured of the finest quality optical system available. A wide selection of objectives, objective mounts, condensing systems and slide carriers will provide you with the exact model you need.

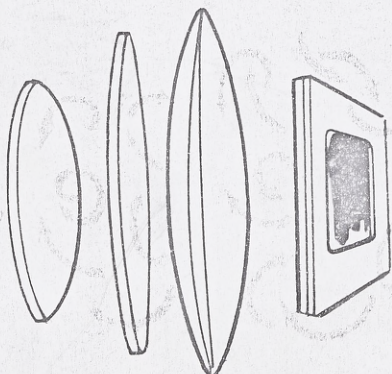
**SUPERIOR SCREEN ILLUMINATION:** 750 watt lamp ... scientific collimation of entire optical system provides uniform screen illumination from edge to edge, with maximum brilliance. No hot spots, no corner color fringe.

**EFFICIENT COOLING SYSTEM:** A stream of forced air circulates through the condenser housing and over both sides of the slide. Each condenser chest has infra-red absorbing filter to provide additional protection to slides and color transparencies.

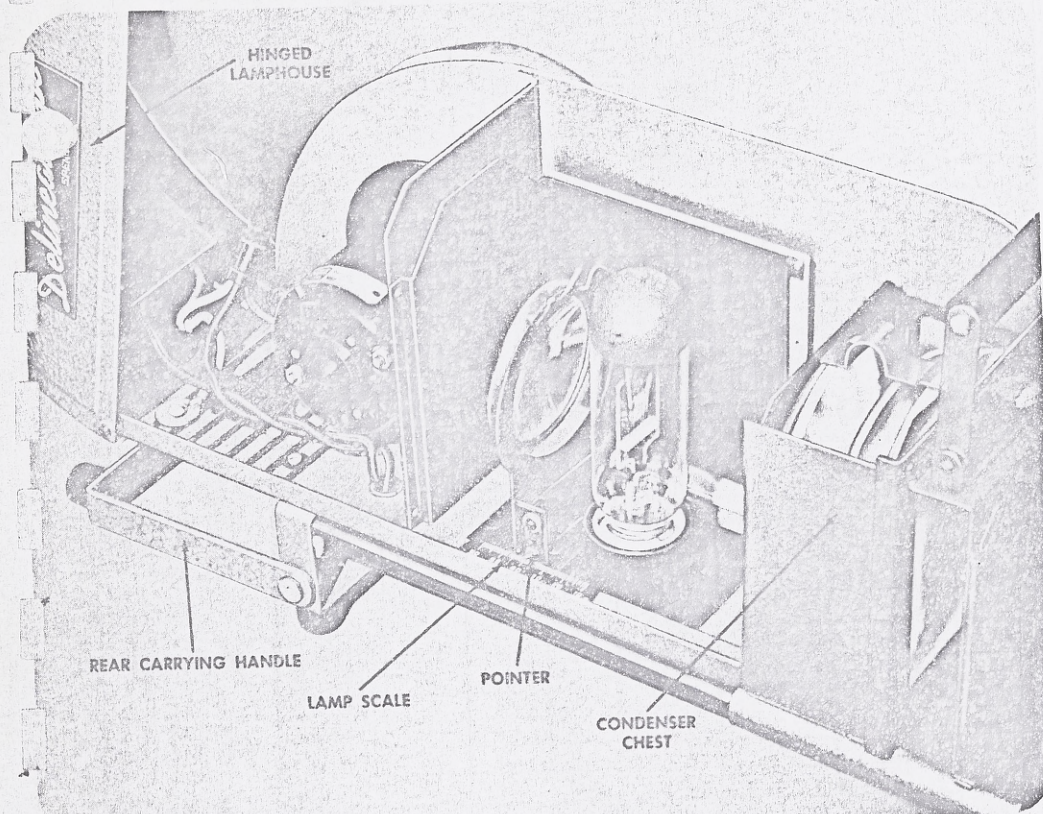


**EASE OF OPERATION:** All mechanical and optical adjustments are sensibly located for your best convenience. Three-way switch is at rear. Smooth rack-and-pinion action obtains critical focus. Lamp, condenser chests and slide carriers are easily interchangeable. Wood-and-aluminum slide carriers are quiet operating ... have illuminated indicator which guarantees quick, correct slide insertion with slides accurately centered.

**CHOICE OF 3 OBJECTIVE MOUNTS:** Designed to make the Standard GK Slide Projector **instantly** convertible to a High Speed model, AO offers three objective mounts - High Speed, Rack and Pinion and Manual Focusing.







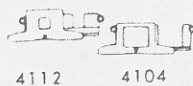
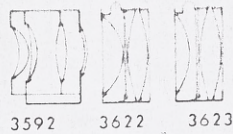
**STURDILY BUILT . . . SIMPLE MAINTENANCE:** All-metal construction gives rigid stability and permanent optical alignment. Attractive gray Stip-Tone enamel is easy to clean. Permanently attached 3-wire cord, UL and CSA approved. Hinged lamphouse tilts up easily, allows instant lamp replacement and interchange of condenser chests. Sturdy metal carrying case included as standard equipment on all models.

## PROJECTION CHART

| IF SLIDE<br>SIZE IS                                                                     | AND OBJECTIVE HAS: |                             |                           |       | USE<br>CON-<br>DENSER<br>CHEST | SET<br>POINTER<br>AT LAMP<br>SCALE<br>NO. | WIDTH OF SCREEN IMAGE (IN FEET AND DECIMAL<br>FRACTIONS) WHEN DISTANCE TO SCREEN IS: |     |     |     |      |      |      |      |      |      |      |      |      |
|-----------------------------------------------------------------------------------------|--------------------|-----------------------------|---------------------------|-------|--------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|
|                                                                                         | CATALOG<br>NUMBER  | FOCAL<br>LENGTH<br>(Inches) | DIA-<br>METER<br>(Inches) | f/no. |                                |                                           | 10'                                                                                  | 15' | 20' | 25' | 30'  | 40'  | 50'  | 60'  | 70'  | 80'  | 90'  | 100' |      |
| 2" x 2"<br>ASA<br>APERTURE<br>23 x 34 MM                                                | STANDARD           | 3912                        | 6½                        | 2⅝    | 2.7                            | 3592                                      | 10                                                                                   | 1.9 | 3.0 | 4.0 | 5.0  | 6.1  | 8.1  | 10.2 | 12.2 | 14.3 |      |      |      |
|                                                                                         |                    | 3922                        | 8½                        | 2⅝    | 3.65                           | 3592                                      | 10                                                                                   | 1.5 | 2.3 | 3.0 | 3.8  | 4.6  | 6.2  | 7.8  | 9.3  | 10.9 | 12.5 |      |      |
|                                                                                         |                    | 3924                        | 10                        | 2⅝    | 4.3                            | 3592                                      | 10                                                                                   | 1.2 | 1.9 | 2.6 | 3.2  | 3.9  | 5.2  | 6.6  | 7.9  | 9.3  | 10.6 | 11.9 | 13.3 |
|                                                                                         |                    | 3927                        | 12½                       | 2⅝    | 5.3                            | 3592                                      | 10                                                                                   | 1.0 | 1.6 | 2.0 | 2.6  | 3.1  | 4.2  | 5.3  | 6.4  | 7.4  | 8.5  | 9.6  | 10.6 |
|                                                                                         | HIGH<br>SPEED      | 3943                        | 15½                       | 4⅜    | 4.5                            | 3592                                      | 10                                                                                   | .8  | 1.2 | 1.6 | 2.0  | 2.4  | 3.4  | 4.2  | 5.0  | 6.0  | 6.3  | 7.7  | 8.5  |
|                                                                                         |                    | 3942                        | 20                        | 4⅜    | 5.6                            | 3592                                      | 10                                                                                   | .6  | .9  | 1.3 | 1.6  | 1.9  | 2.6  | 3.3  | 4.0  | 4.6  | 5.3  | 6.0  | 6.6  |
| 2¼" x 2¼"<br>or<br>2¾" x 2¾"<br>ASA<br>APERTURE<br>2⅝ x 2⅝<br>Inches                    | STANDARD           | 3920                        | 6½                        | 1⅞    | 5.6                            | 3622                                      | 38                                                                                   | 3.2 | 4.9 | 6.5 | 8.2  | 9.9  | 13.3 | 16.6 |      |      |      |      |      |
|                                                                                         |                    | 3922                        | 8½                        | 2⅝    | 3.65                           | 3622                                      | 31                                                                                   | 2.4 | 3.7 | 5.0 | 6.3  | 7.5  | 10.1 | 12.7 | 15.3 |      |      |      |      |
|                                                                                         |                    | 3924                        | 10                        | 2⅝    | 4.3                            | 3622                                      | 28                                                                                   | 2.0 | 3.1 | 4.2 | 5.3  | 6.4  | 8.6  | 10.8 | 12.9 | 15.1 |      |      |      |
|                                                                                         |                    | 3927                        | 12½                       | 2⅝    | 5.3                            | 3622                                      | 25                                                                                   | 1.6 | 2.5 | 3.4 | 4.2  | 5.1  | 6.8  | 8.6  | 10.4 | 12.1 | 13.9 | 15.6 |      |
|                                                                                         |                    | 3928                        | 16                        | 2⅝    | 6.8                            | 3623                                      | 44                                                                                   | 1.2 | 1.9 | 2.6 | 3.2  | 3.9  | 5.3  | 6.6  | 8.0  | 9.4  | 10.8 | 12.1 | 13.5 |
|                                                                                         |                    | 3930                        | 20                        | 2⅝    | 8.5                            | 3623                                      | 37                                                                                   | 1.2 | 1.5 | 2.0 | 2.6  | 3.1  | 4.2  | 5.3  | 6.4  | 7.5  | 8.6  | 9.7  | 10.8 |
|                                                                                         | HIGH<br>SPEED      | 3978                        | 24                        | 2⅝    | 10.2                           | 3623                                      | 36                                                                                   |     | 1.2 | 1.6 | 2.1  | 2.6  | 3.5  | 4.4  | 5.3  | 6.2  | 7.1  | 8.0  | 8.9  |
|                                                                                         |                    | 3943                        | 15½                       | 4⅜    | 4.5                            | 3623                                      | 44                                                                                   | 1.2 | 1.9 | 2.6 | 3.3  | 4.0  | 5.4  | 6.8  | 8.2  | 9.7  | 11.1 | 12.4 | 13.9 |
|                                                                                         |                    | 3942                        | 20                        | 4⅜    | 5.6                            | 3623                                      | 37                                                                                   |     | 1.5 | 2.0 | 2.6  | 3.1  | 4.2  | 5.3  | 6.4  | 7.5  | 8.6  | 9.7  | 10.8 |
|                                                                                         |                    | 3920                        | 6½                        | 1⅞    | 5.6                            | 3622                                      | 38                                                                                   | 4.4 | 6.7 | 9.0 | 11.3 | 13.6 |      |      |      |      |      |      |      |
|                                                                                         |                    | 3922                        | 8½                        | 2⅝    | 3.65                           | 3622                                      | 33                                                                                   | 3.3 | 5.0 | 6.8 | 8.6  | 10.3 | 13.9 |      |      |      |      |      |      |
|                                                                                         |                    | 3924                        | 10                        | 2⅝    | 4.3                            | 3622                                      | 30                                                                                   | 2.8 | 4.2 | 5.8 | 7.2  | 8.8  | 11.8 | 14.8 |      |      |      |      |      |
| 3¼" x 3¼"<br>ASA APERTURE<br>2¾" x 2¾"<br>or<br>3¼" x 4"<br>ASA<br>APERTURE<br>2¾" x 3" | STANDARD           | 3927                        | 12½                       | 2⅝    | 5.3                            | 3622                                      | 27                                                                                   | 2.1 | 3.4 | 4.6 | 5.8  | 7.1  | 9.4  | 11.8 | 14.2 |      |      |      |      |
|                                                                                         |                    | 3928                        | 16                        | 2⅝    | 6.8                            | 3623                                      | 46                                                                                   | 1.6 | 2.6 | 3.5 | 4.4  | 5.4  | 7.3  | 9.1  | 11.0 | 12.9 | 14.8 |      |      |
|                                                                                         |                    | 3930                        | 20                        | 2⅝    | 8.5                            | 3623                                      | 37                                                                                   |     | 2.0 | 2.8 | 3.5  | 4.3  | 5.8  | 7.3  | 8.8  | 10.3 | 11.8 | 13.3 | 14.8 |
|                                                                                         | HIGH<br>SPEED      | 3978                        | 24                        | 2⅝    | 10.2                           | 3623                                      | 36                                                                                   |     | 1.6 | 2.2 | 2.9  | 3.5  | 4.8  | 6.0  | 7.2  | 8.5  | 9.8  | 11.0 | 12.3 |
|                                                                                         |                    | 3942                        | 20                        | 4⅜    | 5.6                            | 3623                                      | 37                                                                                   |     | 2.0 | 2.8 | 3.5  | 4.3  | 5.8  | 7.3  | 8.8  | 10.3 | 11.8 | 13.3 | 14.8 |
|                                                                                         |                    | 3943                        | 15½                       | 4⅜    | 4.5                            | 3623                                      | 46                                                                                   | 1.6 | 2.6 | 3.6 | 4.5  | 5.5  | 7.5  | 9.3  | 11.3 | 13.3 | 15.2 |      |      |



## STANDARD SERIES



See Projector Chart  
For Optical Performance



3979 3620 3944

| Cat. No.<br>Model<br>GK | CONDENSERS               |                              | SLIDE CARRIERS           |                              | PROJECTION OBJECTIVES                           |          |        | OBJECTIVE MOUNTS     |                             |               |
|-------------------------|--------------------------|------------------------------|--------------------------|------------------------------|-------------------------------------------------|----------|--------|----------------------|-----------------------------|---------------|
|                         | for<br>2" x 2"<br>Slides | for<br>3-1/4" x 4"<br>Slides | for<br>2" x 2"<br>Slides | for<br>3-1/4" x 4"<br>Slides | Focal Length in Inches<br>2-5/8" 1-7/8" 4-3/16" | Diameter | Dia.   | Standard<br>(Manual) | Standard<br>(Rack & Pinion) | High<br>Speed |
| 3690-SE                 |                          | X                            |                          | X                            | 12 1/2"                                         |          |        | X                    |                             |               |
| 3690-SF                 |                          | X                            |                          | X                            | 16"                                             |          |        | X                    |                             |               |
| 3690-SJ                 |                          | X                            |                          | X                            | 24"                                             |          |        | X                    |                             |               |
| 3690-SK                 |                          | X                            |                          | X                            |                                                 |          | 6 1/2" | X                    |                             |               |
| 3690-SL                 |                          | X                            |                          | X                            | 8 1/2"                                          |          |        | X                    |                             |               |
| 3690-SM                 | X                        | X                            | X                        | X                            | 6 1/2", 12 1/2"                                 |          |        | X                    |                             |               |
| 3690-SN                 | X                        | X                            | X                        | X                            | 8 1/2", 16"                                     |          |        | X                    |                             |               |
| 3690-SP                 | X                        | X                            | X                        | X                            | 10", 20"                                        |          |        | X                    |                             |               |
| 3690-RA                 | X                        |                              | X                        |                              | 6 1/2"                                          |          |        |                      | X                           |               |
| 3690-RE                 |                          | X                            |                          | X                            | 12 1/2"                                         |          |        |                      | X                           |               |
| 3690-RF                 |                          | X                            |                          | X                            | 16"                                             |          |        |                      | X                           |               |
| 3690-RK                 |                          | X                            |                          | X                            |                                                 |          | 6 1/2" |                      | X                           |               |
| 3690-RL                 |                          | X                            |                          | X                            | 8 1/2"                                          |          |        |                      | X                           |               |
| 3690-RM                 | X                        | X                            | X                        | X                            | 6 1/2", 12 1/2"                                 |          |        |                      | X                           |               |
| 3690-RN                 | X                        | X                            | X                        | X                            | 8 1/2", 16"                                     |          |        |                      | X                           |               |
| 3690-RT                 | X                        | X                            | X                        | X                            | 12 1/2", 24"                                    |          |        |                      | X                           |               |

## HIGH SPEED SERIES

|         |  |   |  |   |  |  |         |  |  |   |
|---------|--|---|--|---|--|--|---------|--|--|---|
| 3690-HU |  | X |  | X |  |  | 15 1/2" |  |  | X |
| 3690-HV |  | X |  | X |  |  | 20"     |  |  | X |

Sturdy metal carrying case included as standard equipment on all models.

## OPTIONAL ACCESSORIES

- 3592 2" x 2" Condenser Chest
- 3618 Slide Carrier for 2 1/4" x 2 1/4" Polarized Slides
- 3620 Standard Objective Mount (Rack and Pinion)
- 3622 3 1/4" x 4" or 2 3/4" x 2 3/4" Condenser for 6 1/2" to 12 1/2" focal length objectives
- 3623 3 1/4" x 4" or 2 3/4" x 2 3/4" Condenser for 15 1/2" or longer focal length objectives

- 3943 15 1/2" focal length, 4 3/8" diameter High Speed Projection Objective
- 3942 20" focal length, 4 3/8" diameter High Speed Projection Objective
- 3944 High Speed Objective Mount
- 3979 Standard Objective Mount (Manual Focus)
- 4030 Extra 750 Watt Lamp (DDB)

- 4104 3 1/4" x 4" Slide Carrier (also accommodates 3 1/4" x 4" Polarized Slides)
- 4112 2" x 2" Slide Carrier
- 4115 2 1/4" x 2 3/4" Slide Carrier

® Reg. Trade Mark by Polaroid Corp

**AO<sup>®</sup>** American Optical  
SCIENTIFIC INSTRUMENT DIVISION  
BUFFALO, NY 14215

® T.M. Reg., American Optical Corporation



D-U-N-S 00-958-5100

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• PROFESSIONAL  
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INVOICE

86588

SOLD TO

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1842 ROSE VILLA ST.  
PASADENA, CA. 91107

SHIP TO SAME

| P. O. NUMBER                 |            | RELEASE/CALL |      | DATE<br>OCT 2 80                                    |  | COMPLETE <input checked="" type="checkbox"/> INCOMPLETE <input type="checkbox"/> |          | MISC.         |  |
|------------------------------|------------|--------------|------|-----------------------------------------------------|--|----------------------------------------------------------------------------------|----------|---------------|--|
| PACKING SLIP NUMBER<br>86588 |            |              |      | SHIP VIA<br>UPS <input checked="" type="checkbox"/> |  | STATE & LOCAL TAXES<br>NOT INCLUDED <input type="checkbox"/>                     |          | TERMS:<br>COD |  |
| SHIPPED                      | UNIT PRICE | UNIT         | SIZE | DESCRIPTION                                         |  |                                                                                  | ITEM NO. | TOTAL         |  |
| 2                            | 30.36      | 3 1/4        | X 4  | EMDE GLASS #11                                      |  |                                                                                  |          | 60.72         |  |
| 2                            | 11.16      | 3/8          |      | SCOTCH TAPE                                         |  |                                                                                  |          | 22.32         |  |
|                              |            |              |      |                                                     |  |                                                                                  |          | -----         |  |
|                              |            |              |      |                                                     |  |                                                                                  |          | 83.04         |  |
| SUB-TOTAL                    |            |              |      |                                                     |  |                                                                                  |          | 1.15          |  |
| COD CHARGES                  |            |              |      |                                                     |  |                                                                                  |          | 5.05          |  |
| SALES TAX .06                |            |              |      |                                                     |  |                                                                                  |          | 1.80          |  |
| UPS CHARGES                  |            |              |      |                                                     |  |                                                                                  |          | -----         |  |
| TOTAL                        |            |              |      |                                                     |  |                                                                                  |          | 91.04         |  |

C.O.D.

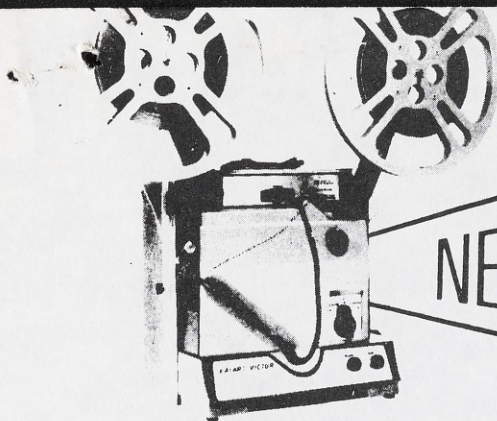
SUB-TOTAL  
COD CHARGES  
SALES TAX .06  
UPS CHARGES

TOTAL

NN

SHORTAGES MUST BE REPORTED WITHIN 10 DAYS - ITEMS NOT SHOWN ARE ON BACK ORDER





**KALART VICTOR**  
CORPORATION  
PLAINVILLE, CONNECTICUT 06062  
PHONE 203 747-1663

AUDIO VISUAL  
AND  
EDUCATIONAL TELEVISION  
PRODUCTS

For Release: IMMEDIATE

Date: June 28, 1978

KALART VICTOR CORPORATION ACQUIRES AUDIO-VISUAL PROJECTION  
LINE FROM AMERICAN OPTICAL CORPORATION

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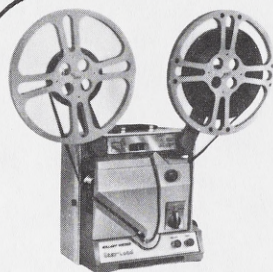
KALART VICTOR, of Plainville, CT., is pleased to announce the purchase of the complete line of projection equipment from the AMERICAN OPTICAL CORPORATION, of Buffalo, N.Y.

This quality equipment, which includes Overhead, Opaque and Lantern Slide Projectors, has been produced and sold by AO for many years and has achieved a fine reputation for performance and reliability in the market-place.

This product line will be manufactured by KALART VICTOR in its modern plant in Plainville, CT. and will augment its present line of 16mm sound motion picture projection equipment, CRAIG editing equipment and TELE-BEAM large-screen TV equipment. Servicing and spare parts replacement will be provided through its network of dealers and from its plant.

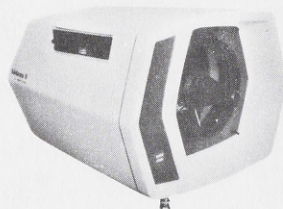
KALART VICTOR is recognized as a prominent manufacturer of audio-visual equipment, which is sold nationwide and throughout the world through a network of dealers and distributors, and has secured the President's "E" Award for excellence in exporting. Its program of product reliability and improvement has provided this organization with a fine performance record in the educational, industrial, sales and government markets.



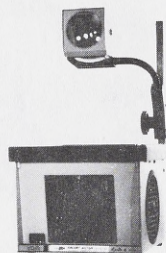


SERIES 90 EASY LOAD

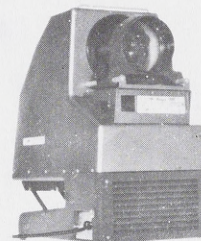
**NOW** ***KALART VICTOR*** HAS  
 ADDED THE FORMER **AMERICAN OPTICAL**  
 LINE OF OVERHEAD OPAQUE AND  
 LANTERN SLIDE PROJECTORS TO ITS  
 AUDIO VISUAL EQUIPMENT FAMILY



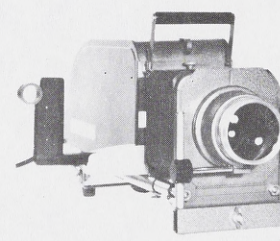
TELE BEAM II



APOLLO OVERHEAD



OPAQUE



LANTERN SLIDE



CRAIG EDITING EQUIPMENT



***KALART VICTOR*** CORPORATION  
 PLAINVILLE, CONNECTICUT 06062, U.S.A.

CONTACT US FOR MORE INFORMATION

K 18



PACKAGE COPY



# KALART VICTOR CORPORATION

AUDIO—VISUAL AND EDUCATIONAL TELEVISION PRODUCTS

PLAINVILLE, CONNECTICUT 06062 U.S.A.

INVOICE NO. **E 51424**

INVOICE DATE

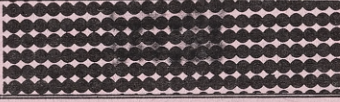
OUR ORDER NO. **42740 AP**

SOLD TO:

SHIP TO:

MR. S.K.A. SMITH  
1842 ROSE VILLA ST.  
PASADENA, CALIF. 91107

SAME

|                                                |  |                                          |                                        |                                                                                                |
|------------------------------------------------|--|------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------|
| YOUR ORDER NO. AND DATE<br><b>LTR. 8/25/80</b> |  | ORDER RECEIVED<br><b>8/28/80</b>         | SHIP VIA<br><b>UPS PREPAID</b>         | SHIPPED<br> |
| KEY ACCOUNT NO.<br><b>905</b>                  |  | DATE ENTERED<br><b>8/28/80 MB</b>        | F.O.B.<br><b>PLAINVILLE, CT. 06062</b> |                                                                                                |
|                                                |  | SCHEDULED FOR SHIPMENT<br><b>8/29/80</b> |                                        |                                                                                                |

| QUANTITY |         |     | DESCRIPTION                                                                               | UNIT | PRICE | SHIPPING CLERK'S NOTATIONS                                                                                                                                                                            |
|----------|---------|-----|-------------------------------------------------------------------------------------------|------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ON ORDER | SHIPPED | B/O |                                                                                           |      |       |                                                                                                                                                                                                       |
| 1        |         |     | 3690 RF GK PROJECTOR<br><br>SERIAL # <u>377510</u><br><br><i>1st projector they sent.</i> |      |       | KIND OF PACKAGE<br><br>NUMBER OF PIECES<br><br>DIMENSIONS<br><br>NET WEIGHT<br><br>GROSS WEIGHT<br><br>SPECIAL INSTRUCTIONS<br><br>DATE PACKED<br><br>PACKED BY<br><br>DATE SHIPPED<br><br>SHIPPED BY |

WHEN REMITTING, PLEASE REFER TO OUR INVOICE NUMBER  
A 1% SERVICE CHARGE PER MONTH WILL BE CHARGED ON ACCOUNTS 30 DAYS PAST DUE. ANNUAL PERCENTAGE RATE IS 12%

NOTICE—NO CLAIMS ALLOWED UNLESS PRESENTED WITHIN TEN DAYS AFTER RECEIPT OF GOODS. RETURN NO GOODS WITHOUT OUR AUTHORIZATION AND SHIPPING INSTRUCTIONS. ALL GOODS RECEIVED FOR IN GOOD ORDER BY THE CARRIER. IN CASE OF DAMAGE IN TRANSIT, FILE CLAIM WITH TRANSPORTATION COMPANY AND ADVISE SHIPPER.

**KALART VICTOR**® 16mm SOUND MOTION PICTURE PROJECTORS. CRAIG® SUPER 8mm, 16mm FILM EDITORS.

TELE-BEAM® LARGE SCREEN TV PROJECTORS

16mm TV FILM CHAIN.

APOLLO® OVERHEAD, DELINEASCOPE® OPAQUE AND GK LANTERN SLIDE PROJECTORS

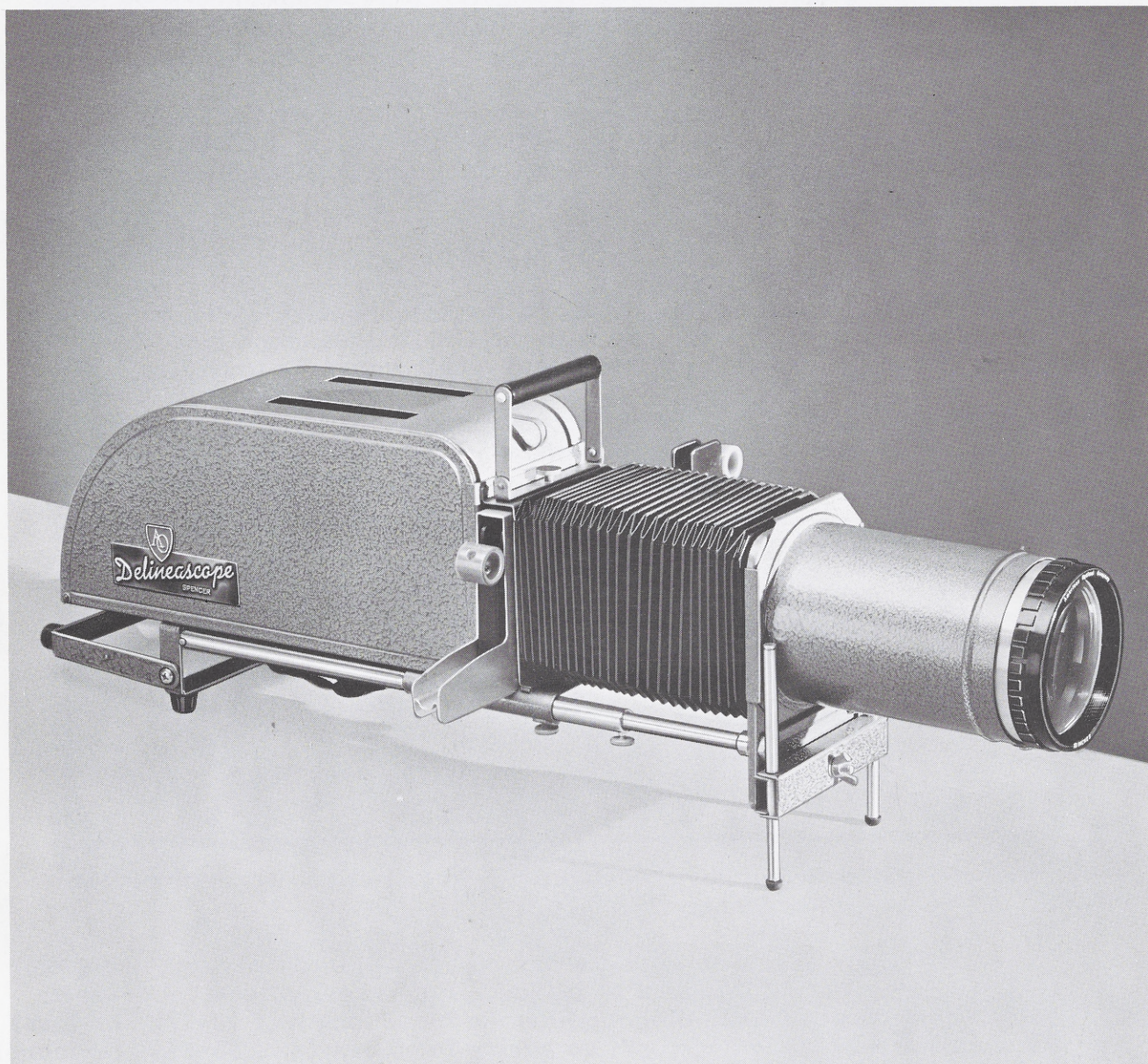
FORM 2028 D-5-687





SPENCER

## GK DELINEASCOPE REFERENCE MANUAL



**AMERICAN OPTICAL  
CORPORATION**

SCIENTIFIC INSTRUMENT DIVISION • BUFFALO, N.Y. 14215



# READ AND UNDERSTAND ALL INSTRUCTIONS

---

## IMPORTANT SAFEGUARDS

When using your projection equipment, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions.
2. Close supervision is necessary when any appliance is used by or near children. Do not leave projector unattended while in use.
3. Care must be taken as burns can occur from touching hot parts.
4. Do not operate projector with a damaged cord or if the projector has been dropped or damaged — until it has been examined by a qualified serviceman.
5. Do not let cord hang over edge of table or counter or touch hot surfaces.
6. If an extension cord is necessary, a cord with a suitable current rating should be used. Cords rated for less amperage than the projector may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
7. Always unplug projector from electrical outlet when not in use. Never yank cord to pull plug from outlet. Grasp plug and pull to disconnect.
8. Let projector cool completely before putting away. Loop cord loosely around projector when storing.
9. To avoid electric shock hazard, do not disassemble this projector, but take it to a qualified serviceman when some service or repair work is required. Incorrect reassembly can cause electric shock hazard when the projector is used subsequently.

Complete repair facilities are available at many AO authorized dealers, and AO Technical Service Centers in Buffalo, N.Y., Chicago, Ill., Glendale, Calif., Springfield, N.J., and Dallas, Texas.

## SAVE THESE INSTRUCTIONS



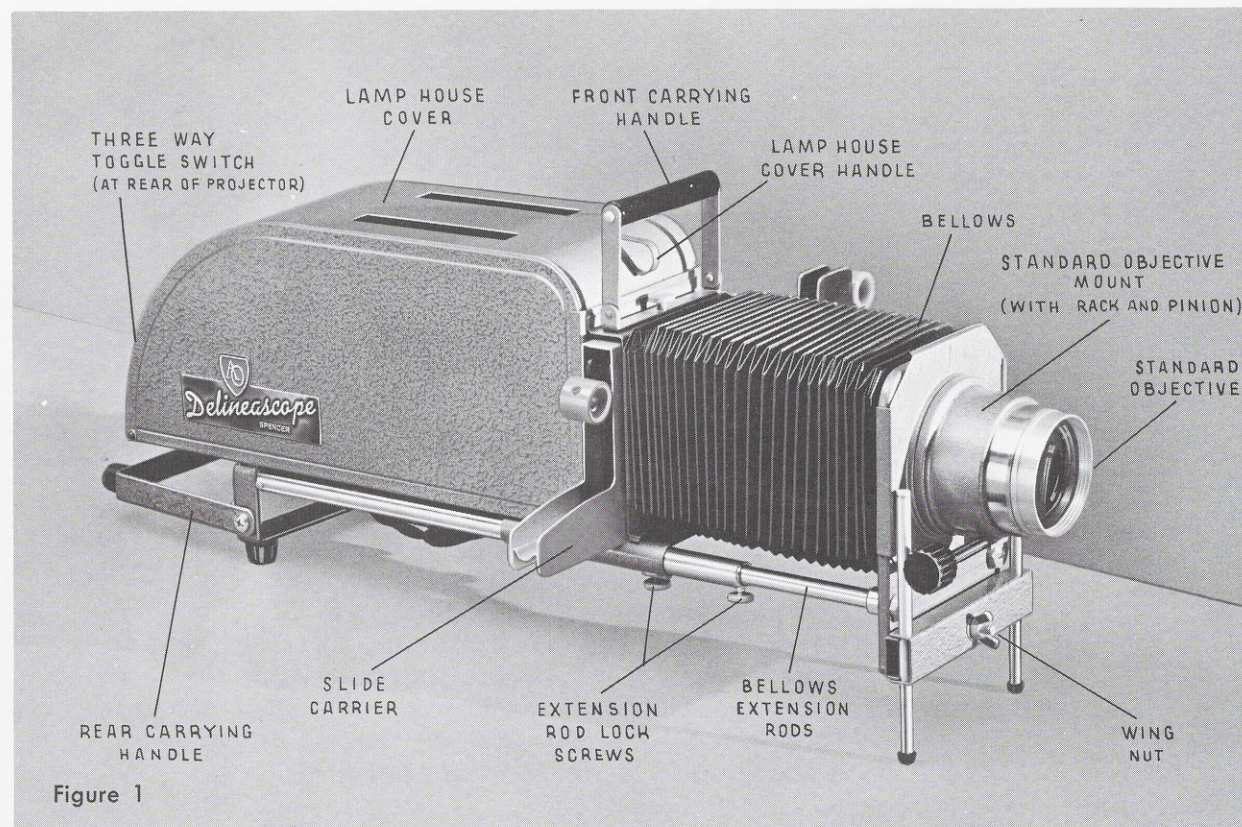


Figure 1

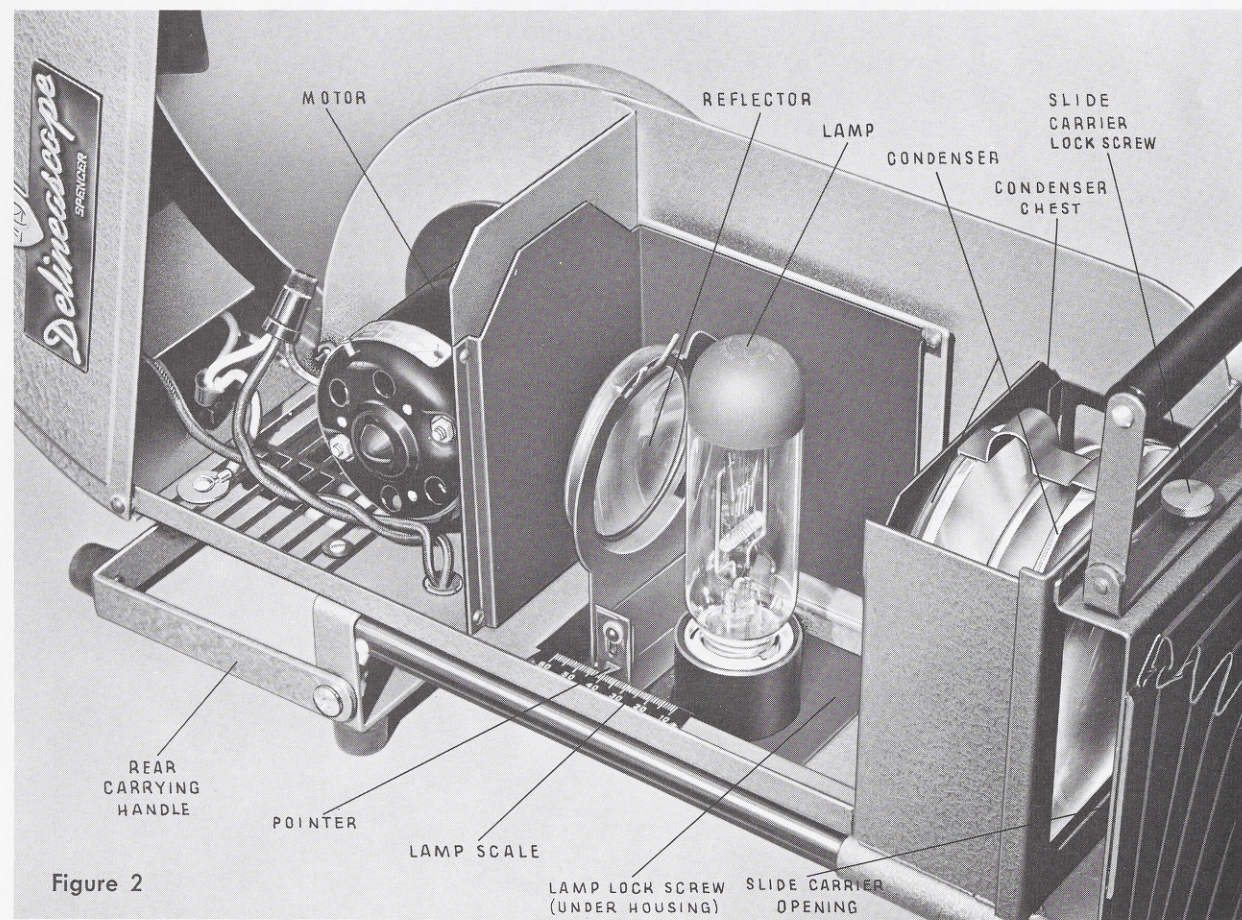


Figure 2

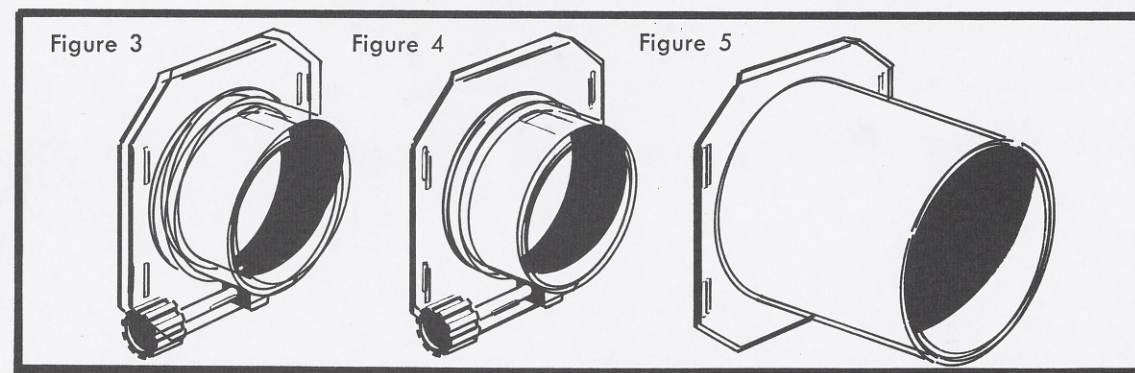
## II. DESCRIPTION

The GK Delineascope will project 2" x 2", 2-3/4" x 2-3/4", 3-1/4" x 3-1/4" (English type), 3-1/4" x 4" slides and 2-1/4" Polaroid slides in Polaroid mounts. The standard AO 3-1/4" x 4" slide carrier can also be used to project 3-1/4" x 4" Polaroid slides in Polaroid mounts.

The GK Delineascope has a 750 watt lamp and operates on 115 volt 60 cycle AC current. A powerful, quiet-operating fan circulates air over both slide and condensers, keeping the slide exceptionally cool. A 15 ft., three-pronged grounded cord, UL and CSA approved, is permanently attached. A two-pronged adapter, with a grounding lead attached, is provided for use with standard outlets. Handles are located at the rear and top for carrying. The rear handle can also be used to elevate the rear of the GK. Lamp life can be increased, and condensers protected, by flipping the three-way toggle switch to the FAN position after prolonged use. This turns the lamp off, but the blower continues to send a cooling wave of air over the lamp and condensers. A lamp scale permits proper positioning of the lamp in relation to the condenser, for optimum light distribution and definition.

## III. ACCESSORIES

- A. **OBJECTIVES:** Eight Standard Objectives and two High Speed objectives are optionally available for use with the GK Delineascope (See Projection Chart, Page 7) providing a total focal length range from 6-1/2" to 24".
- B. **OBJECTIVE MOUNTS:** Two focusable mounts . . . sleeve type or rack and pinion (Figures 3 and 4) accommodate Standard Objectives. A single sleeve-type mount is available for use with High Speed Objectives. All



three mounts have flanges that fit into dove tail slideway on projector for convenient interchange (Fig. 9).

- C. **CONDENSERS:** Three condensers can be readily interchanged. Condenser #3592 is used only for 2" x 2" slides. For larger slides, condenser #3622 must be used (with objective having focal length of 12-1/2" or less) or condenser #3623 (with objective having focal length of 15-1/2" or more) See Figures 6, 7 and 8 and Projection Chart.
- D. **IRIS DIAPHRAGM:** Available for use with 2-5/8" diameter objectives . . . permits light intensity and lens speed to be varied to improve contrast and definition.



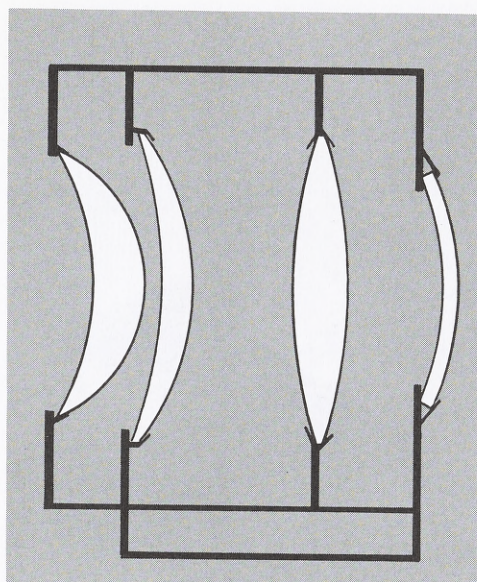


Figure 6

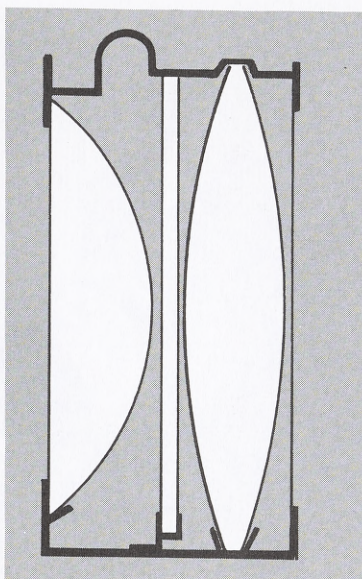


Figure 7

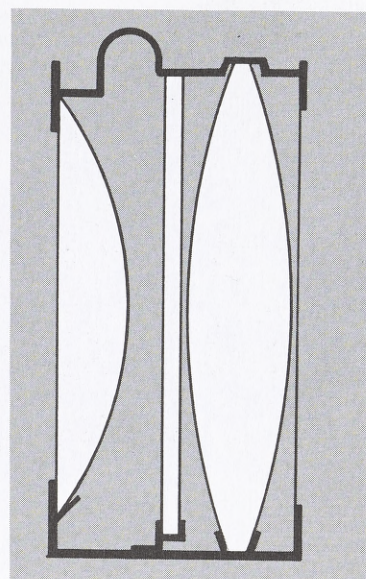


Figure 8

- E. **SLIDE CARRIERS:** Four slide carriers . . . 3-1/4" x 4", 2" x 2", 2-3/4" x 2-3/4" and special slide carrier for 2-1/4" x 2-1/4" Polaroid slides are available.

#### IV. OPERATION

- A. **SET-UP:** Place GK Delineascope on a table large enough to accommodate full extension of bellows. Open lamp-house cover by grasping lamp-house cover handle (Fig. 1) and pulling up and back. Remove any packing papers inside of projector. See Projection Chart for correct lamp scale setting for the combination of slide, objective, and condenser to be used. Loosen the lamp lock screw (located under the projector, as indicated in Fig. 2), slide lamp and reflector assembly so pointer is opposite the proper number on the lamp scale (Fig. 2) as determined from Projection Chart. Lamp setting is most important, since the lamp must be in the proper position to insure full illumination and definition. If the lamp is set too close to the condenser, the screen image will develop a bluish tinge at the corners. If it is set too far from the condenser, a brownish tinge will appear at the corners. (When a change is made in the size of the slides being projected (or, in some cases, in the focal length of the objective being used) lamp must be reset in accordance with Projection Chart.

Insert empty objective mount on projector (Fig. 9), push mount all the way down. Place objective in mount, with numerals indicating the focal length to the front of the projector. Loosen the slide carrier lock screw (Fig. 2), and insert slide carrier in opening (Fig. 2), with Lucite strip on the carrier facing the rear of the projector. Center the carrier and tighten the screw. (In a dark room with the projector turned on, the Lucite will transmit sufficient light to read notes and identify slides.) Plug cord into outlet . . . place slide in carrier, and turn on projector.

- B. **FOCUS:** Loosen lock screws on bellows extension rods (Fig. 1). Extend bellows until image is clearly visible on screen . . . tighten lock screws. Focus with objective until image is sharp. It may be necessary to re-adjust bellows before image can be sharply focused with objective.



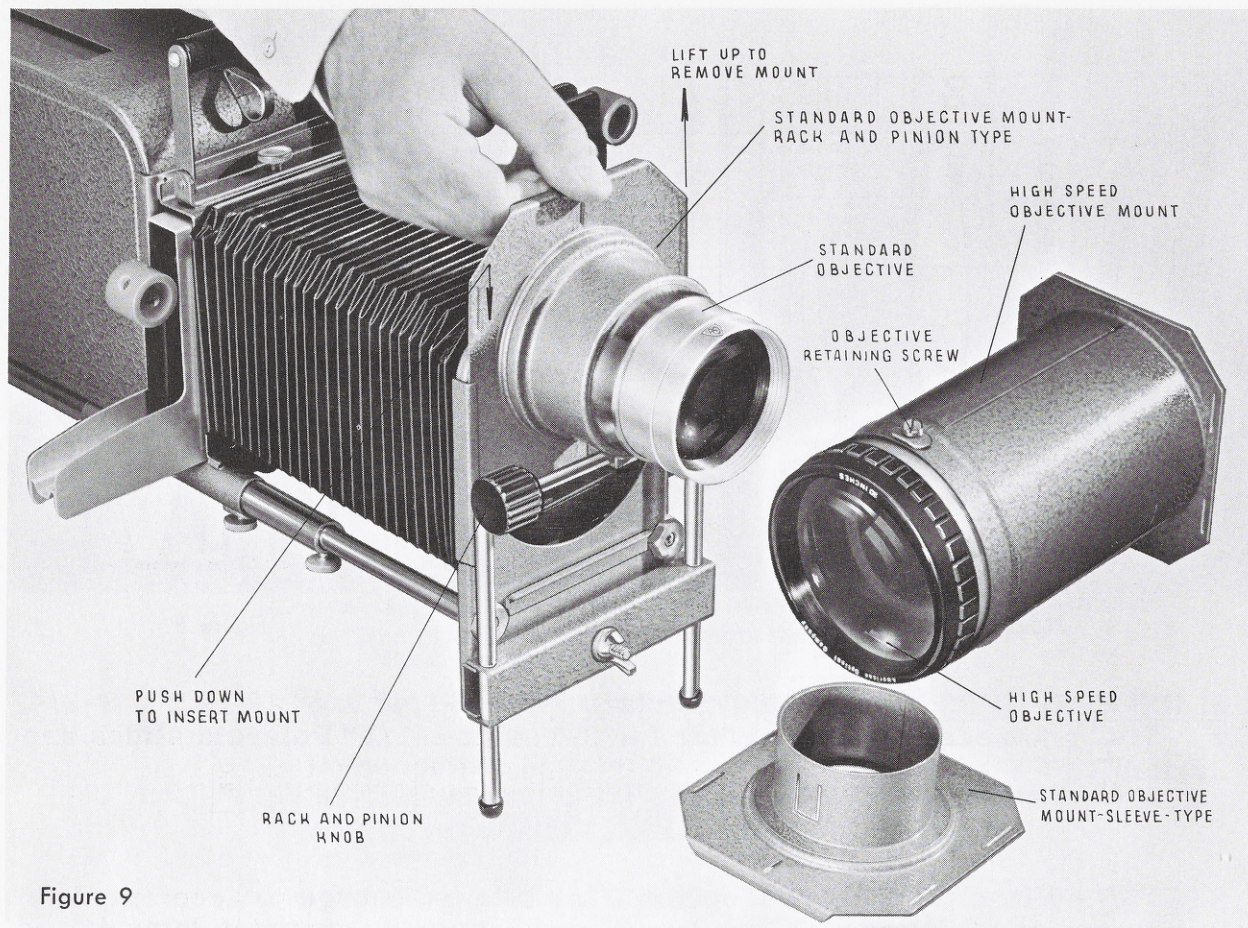


Figure 9

- C. **CENTER IMAGE:** Center image on the screen horizontally by moving the front of the projector left or right as needed. To center image vertically, loosen wing nut on the front (Fig. 1) and raise projector to proper height. Tighten wing nut to maintain this position. The rear handle (Fig. 1) can be used as an elevating device to raise the rear of the projector. The accessory iris diaphragm (see section III, D) is attached by slipping over front of the objective. Jarring the projector during or immediately after use should be avoided as this may cause lamp filaments to break. Projector should not be exposed to cold air immediately after use to avoid possibility of cracking condenser.

## V. INTERCHANGING CONDENSERS, OBJECTIVES, OBJECTIVE MOUNTS

Condensers and objectives must be used in proper combination as shown in Projection Chart.

- A. **CHANGING CONDENSERS:** Open lamp house cover (see section III). Lift condenser chest straight up and out. Fit flange of replacement chest into dovetail on housing and push chest straight down until it comes to stop against housing. Reset lamp (determine setting from Projection Chart) and close lamp house cover.
- B. **CHANGING OBJECTIVES:** Standard objectives are held in mounts by friction. Simply pull out objective and insert replacement. High speed objectives are held by self-retained screw. Loosen screw and pull out



# PROJECTION CHART

| IF SLIDE<br>SIZE IS                                                                        | AND OBJECTIVE HAS: |                             |                           |       | USE<br>CONDENSER<br>CHEST | SET<br>POINTER<br>AT LAMP<br>SCALE<br>NO. |    |
|--------------------------------------------------------------------------------------------|--------------------|-----------------------------|---------------------------|-------|---------------------------|-------------------------------------------|----|
|                                                                                            | CATALOG<br>NUMBER  | FOCAL<br>LENGTH<br>(Inches) | DIA-<br>METER<br>(Inches) | f/no. |                           |                                           |    |
| 2" x 2"<br>ASA<br>APERTURE<br>23 x 34<br>MM                                                | STANDARD           | 3912                        | 6½                        | 2⅝    | 2.7                       | 3592                                      | 10 |
|                                                                                            |                    | 3922                        | 8½                        | 2⅝    | 3.65                      | 3592                                      | 10 |
|                                                                                            |                    | 3924                        | 10                        | 2⅝    | 4.3                       | 3592                                      | 10 |
|                                                                                            |                    | 3927                        | 12½                       | 2⅝    | 5.3                       | 3592                                      | 10 |
|                                                                                            | HIGH<br>SPEED      | 3943                        | 15½                       | 4⅜    | 4.5                       | 3592                                      | 10 |
|                                                                                            |                    | 3942                        | 20                        | 4⅜    | 5.6                       | 3592                                      | 10 |
| 2¼" x 2¼"<br>or<br>2¾" x 2¾"<br>ASA<br>APERTURE<br>2⅜ x 2⅜<br>Inches                       | STANDARD           | 3920                        | 6½                        | 1⅞    | 5.6                       | 3622                                      | 38 |
|                                                                                            |                    | 3922                        | 8½                        | 2⅝    | 3.65                      | 3622                                      | 31 |
|                                                                                            |                    | 3924                        | 10                        | 2⅝    | 4.3                       | 3622                                      | 28 |
|                                                                                            |                    | 3927                        | 12½                       | 2⅝    | 5.3                       | 3622                                      | 25 |
|                                                                                            |                    | 3928                        | 15½                       | 2⅝    | 6.8                       | 3623                                      | 44 |
|                                                                                            |                    | 3930                        | 20                        | 2⅝    | 8.5                       | 3623                                      | 37 |
|                                                                                            | HIGH<br>SPEED      | 3978                        | 24                        | 2⅝    | 10.2                      | 3623                                      | 36 |
|                                                                                            |                    | 3943                        | 15½                       | 4⅜    | 4.5                       | 3623                                      | 44 |
|                                                                                            |                    | 3942                        | 20                        | 4⅜    | 5.6                       | 3623                                      | 37 |
| 3¼" x 3¼"<br>ASA<br>APERTURE<br>2¾" x 2¾"<br>or<br>3¼" x 4"<br>ASA<br>APERTURE<br>2¾" x 3" | STANDARD           | 3920                        | 6½                        | 1⅞    | 5.6                       | 3622                                      | 38 |
|                                                                                            |                    | 3922                        | 8½                        | 2⅝    | 3.65                      | 3622                                      | 33 |
|                                                                                            |                    | 3924                        | 10                        | 2⅝    | 4.3                       | 3622                                      | 30 |
|                                                                                            |                    | 3927                        | 12½                       | 2⅝    | 5.3                       | 3622                                      | 27 |
|                                                                                            |                    | 3928                        | 15½                       | 2⅝    | 6.8                       | 3623                                      | 46 |
|                                                                                            |                    | 3930                        | 20                        | 2⅝    | 8.5                       | 3623                                      | 37 |
|                                                                                            | HIGH<br>SPEED      | 3978                        | 24                        | 2⅝    | 10.2                      | 3623                                      | 36 |
|                                                                                            |                    | 3942                        | 20                        | 4⅜    | 5.6                       | 3623                                      | 37 |
|                                                                                            |                    | 3943                        | 15½                       | 4⅜    | 4.5                       | 3623                                      | 46 |

| WIDTH OF SCREEN IMAGE (IN FEET AND DECIMAL FRACTIONS) WHEN DISTANCE TO SCREEN IS: |     |     |      |      |      |      |      |      |      |      |      |  |
|-----------------------------------------------------------------------------------|-----|-----|------|------|------|------|------|------|------|------|------|--|
| 10'                                                                               | 15' | 20' | 25'  | 30'  | 40'  | 50'  | 60'  | 70'  | 80'  | 90'  | 100' |  |
| 1.9                                                                               | 3.0 | 4.0 | 5.0  | 6.1  | 8.1  | 10.2 | 12.2 | 14.3 |      |      |      |  |
| 1.5                                                                               | 2.3 | 3.0 | 3.8  | 4.6  | 6.2  | 7.8  | 9.3  | 10.9 | 12.5 |      |      |  |
| 1.2                                                                               | 1.9 | 2.6 | 3.2  | 3.9  | 5.2  | 6.6  | 7.9  | 9.3  | 10.6 | 11.9 | 13.3 |  |
| 1.0                                                                               | 1.6 | 2.0 | 2.6  | 3.1  | 4.2  | 5.3  | 6.4  | 7.4  | 8.5  | 9.6  | 10.6 |  |
| .8                                                                                | 1.2 | 1.6 | 2.0  | 2.4  | 3.4  | 4.2  | 5.0  | 6.0  | 6.3  | 7.7  | 8.5  |  |
| .6                                                                                | .9  | 1.3 | 1.6  | 1.9  | 2.6  | 3.3  | 4.0  | 4.6  | 5.3  | 6.0  | 6.6  |  |
| 3.2                                                                               | 4.9 | 6.5 | 8.2  | 9.9  | 13.3 | 16.6 |      |      |      |      |      |  |
| 2.4                                                                               | 3.7 | 5.0 | 6.3  | 7.5  | 10.1 | 12.7 | 15.3 |      |      |      |      |  |
| 2.0                                                                               | 3.1 | 4.2 | 5.3  | 6.4  | 8.6  | 10.8 | 12.9 | 15.1 |      |      |      |  |
| 1.6                                                                               | 2.5 | 3.4 | 4.2  | 5.1  | 6.8  | 8.6  | 10.4 | 12.1 | 13.9 | 15.6 |      |  |
| 1.2                                                                               | 1.9 | 2.6 | 3.2  | 3.9  | 5.3  | 6.6  | 8.0  | 9.4  | 10.8 | 12.1 | 13.5 |  |
| 1.2                                                                               | 1.5 | 2.0 | 2.6  | 3.1  | 4.2  | 5.3  | 6.4  | 7.5  | 8.6  | 9.7  | 10.8 |  |
|                                                                                   | 1.2 | 1.6 | 2.1  | 2.6  | 3.5  | 4.4  | 5.3  | 6.2  | 7.1  | 8.0  | 8.9  |  |
| 1.2                                                                               | 1.9 | 2.6 | 3.3  | 4.0  | 5.4  | 6.8  | 8.2  | 9.7  | 11.1 | 12.4 | 13.9 |  |
|                                                                                   | 1.5 | 2.0 | 2.6  | 3.1  | 4.2  | 5.3  | 6.4  | 7.5  | 8.6  | 9.7  | 10.8 |  |
| 4.4                                                                               | 6.7 | 9.0 | 11.3 | 13.6 |      |      |      |      |      |      |      |  |
| 3.3                                                                               | 5.0 | 6.8 | 8.6  | 10.3 | 13.9 |      |      |      |      |      |      |  |
| 2.8                                                                               | 4.2 | 5.8 | 7.2  | 8.8  | 11.8 | 14.8 |      |      |      |      |      |  |
| 2.1                                                                               | 3.4 | 4.6 | 5.8  | 7.1  | 9.4  | 11.8 | 14.2 |      |      |      |      |  |
| 1.6                                                                               | 2.6 | 3.5 | 4.4  | 5.4  | 7.3  | 9.1  | 11.0 | 12.9 | 14.8 |      |      |  |
|                                                                                   | 2.0 | 2.8 | 3.5  | 4.3  | 5.8  | 7.3  | 8.8  | 10.3 | 11.8 | 13.3 | 14.8 |  |
|                                                                                   | 1.6 | 2.2 | 2.9  | 3.5  | 4.8  | 6.0  | 7.2  | 8.5  | 9.8  | 11.0 | 12.3 |  |
|                                                                                   | 2.0 | 2.8 | 3.5  | 4.3  | 5.8  | 7.3  | 8.8  | 10.3 | 11.8 | 13.3 | 14.8 |  |
| 1.6                                                                               | 2.6 | 3.6 | 4.5  | 5.5  | 7.5  | 9.3  | 11.3 | 13.3 | 15.2 |      |      |  |



objective. To replace objective, line up spiral groove with self-retained screw and insert into mount carefully. Tighten screw.

- C. CHANGING OBJECTIVE MOUNTS: Objective mounts are attached to projector with flange and dovetail arrangement. (Fig. 9) To remove, lift mount up and out. To replace, insert flange into dovetail on projector face and seat mount firmly all the way down. Note: Objectives should be removed from mounts before attempting to lift out or replace mount.

## VI. MAINTENANCE

The GK Delineascope is a precision optical instrument designed and constructed to give many years of trouble-free performance. Lamp replacement and periodic cleaning of optics is all the maintenance that should be required.

- A. CLEANING OBJECTIVES: Remove objective from mount (See section V, B) and clean external lens surfaces with lens cleaning fluid and lens cleaning tissue or lint-free cloth. Objectives are factory aligned and sealed and should not be taken apart.
- B. CLEANING CONDENSER ELEMENTS: (Lift out condenser chest. See section V, A). Condenser elements in the No. 3622 Condenser Chest can be removed for cleaning by compressing loop on the retaining clip at top of chest and removing clip. The top of the 3592 Condenser Chest slides off to permit removal of the elements for cleaning. Carefully note how lenses are positioned (Fig. 6, 7 & 8) before removal. Clean with lens cleaning fluid and lint-free cloth. Replace carefully to avoid chipping lens edges. Be sure all fingerprints are removed.

## VII. REPLACEMENT OF PARTS

- A. LAMP: To remove, lift housing cover, push down on lamp and turn counterclockwise. Lift out. To replace, position bayonet fitting over socket, push down and turn clockwise. Remove all fingerprints.
- B. CONDENSER: Remove damaged condenser element and install new one by following procedure described in section VI, B.
- C. OBJECTIVES: DO NOT DISASSEMBLE. Return damaged objectives to the factory for inspection and repair. Replace objectives as described in section V, B.

## VIII. REPLACEMENT PARTS LIST

### 3592 - 2 x 2 Condenser Chest

3592-603 Rear Condenser  
3592-602 Middle Condenser  
3592-601 Front Condenser  
3785-606 Heat Absorbing Glass

3592-851 Chest (without condensers)  
3592-852 Condenser Chest Cover



3622 - 3-1/4 x 4 Condenser Chest (for use with 6-1/2" through 12-1/2" focal length objectives)

- 3607-606 Rear Condenser
- 3607-605 Heat Absorbing Glass
- 3607-601 Front Condenser
- 3622-501 Chest (without condensers)
- 3622-4 - Lens Retaining Clip

3623 - 3-1/4 x 4 Condenser Chest (for use with 15-1/2" or longer focal length objectives)

- 3607-605 Heat Absorbing Glass
- 3607-601 Front Condenser
- 3608-601 Rear Condenser
- 3622-501 Chest (without condenser)
- 3622-4 - Lens Retaining Clip

3689-9 - Front Support Leg

3689-20 - Rubber Foot (front leg)

X-23536-2 - Wing Nut (for front)

01044-3 - Washer (for X23536-2)

3525-64 - Spring (for X23536-2)

X-17078-2 - Screw (for X23536-2)

0615-2 - Screw (for focusing rods and tubes)

0640-2 - Slide Carrier Lock Screw

3499 - Bellows

4030 - Lamp (Manufacturer's part number PH/ 750T12P-115V).

3689-22 - Lamp Lock Screw

3474-601 - Reflector

3330-47 - Rear Rubber Foot

X314-1 - Screw (for use with 3330-47)

3944 - High Speed Objective Mount

3979 - Standard Objective Mount - manual focus

3620 - Standard Objective Mount - rack and pinion focus

0309-4 - Retaining Screw (in High Speed Objective mount)

3689-23 - 3-way Switch

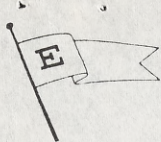




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August 16, 1978

Ms. Sara Kathryn Arledge  
1842 Rose Villa Street  
Pasadena, CA 91107

Dear Ms. Arledge:

Your letter of July 29 addressed to American Optical was forwarded to us since we have purchased the American Optical projection equipment. A copy of our publicity release is enclosed.

The GK Lantern Slide Projector is available for the  $3\frac{1}{4}$ ' x 4" glass slides. There are various objectives available to obtain picture sizes required.

We do not have new literature at the present time and are waiting for a supply from our printer. We have, however, made a copy of the catalogue sheet, which also includes a projection chart that will assist you in ordering the projector with the proper objective for your specific application.

We have also enclosed additional literature fully illustrating and describing our complete line of KALART VICTOR Audio Visual and Educational Television products.

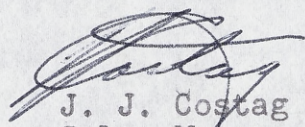
The KALART VICTOR Authorized Dealer for the Overhead, Opaque, and Lantern Slide Projectors in your area is:

Audio Graphic Supply, Inc.  
P.O. Box 1060  
San Bernardino, CA 92402

If we can be of further service, please do not hesitate to contact us.

Very truly yours,

KALART VICTOR Corporation

  
J. J. Costag  
Sales Manager

JJC/dmm  
Enclosures

cc: Audio Graphic Supply, Inc.





SCIENTIFIC INSTRUMENT DIVISION • BUFFALO, NEW YORK, U.S.A. 14215/(716) 895 4000

August 3, 1978

Ms. Sara Kathryn Arledge  
1842 Rose Villa Street  
Pasadena, CA 91107

Dear Ms. Arledge:

American Optical has sold its projection equipment business to the Kalart Victor Corporation.

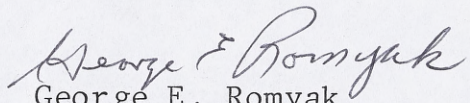
Kalart Victor is now handling all requests for information, equipment, accessories and parts and as a well-established company in the projection business, we are confident that Kalart Victor will provide you with excellent service.

Your correspondence has been forwarded directly to:

Order Department  
Kalart Victor Corporation  
Hultenius Street  
Plainville, CT. 06062

They will answer your correspondence.

Sincerely,

  
George E. Romyak  
Sales Support Department

cc: Kalart Victor Corporation  
Unit 60